

In the Claims

1. (currently amended) A polyethylene-based thermoplastic polymer article stabilized by the incorporation of a stabilizing quantity of a stabilizer composition for the stabilization of polyethylene-based thermoplastic polymers comprising

- a) at least one sterically hindered phenol,
- b) at least one phosphorus-containing secondary antioxidant, and
- c) at least one tocopherol compound

wherein the weight ratio of component (a) to component (b) is from 2:1 to 1:4 and the weight ratio of component (a) to component (c) is from 2:1 to 10:1

during manufacture of the polyethylene-based thermoplastic polymer article.

2. (currently amended) A polymer articlecomposition according to claim 1 wherein the weight ratio of component (a) to component (b) is 1:1 and the weight ratio of component (a) to component (c) is 5:1.

3. (currently amended) A polymer articlecomposition according to claim 1 wherein the tocopherol compound is α -tocopherol (5,7,8-Trimethyl-tocol).

4. (currently amended) A polymer articlecomposition according to claim 1 wherein the sterically hindered phenol is tetrakis[methylene-3-(3',5')-di-tert-butyl-4'-hydroxyphenyl]propionate]methane2,2'-Bis[3,5-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxoprop-oxy]methyl-1,3-propanediyl3,5-bis(1,1-dimethylethyl)-4-hydroxybenzenepropaneate; Octadecyl-3,5- bis(1,1-dimethylethyl)-4-hydroxybenzenepropanoate; 1,3,5-tris[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]1,3,5,-triazine-2,4,6(1H,3H,5H)trione; 4,4',4"- [2,4,6-trimethyl-1 ,3,5-benzenetriyl)tris-(methylene)tris[2,6-bis(1,1-dimethylethyl)-phenol; Ethanediyl-3,5-bis(1,1-dimethylethyl)-4-hydroxy-thiodi-2,1-benzenepropanoate; 2:1 calcium salt of monoethyl-[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-

methyl]-phosphonic acid ester; 2-[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxy-phenyl]-1-oxopropyl]-hydrazide-3,5-bis(1,1 -dimethylethyl)-4-hydroxy-benzene-propanoic acid; 2,2'-oxamido- bis-[ethyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)-propionate] or mixtures thereof.

5. (currently amended) A polymer articlecomposition according to claim 1 wherein the phosphorus-containing secondary antioxidant is Triphenyiphosphite, Tris-isodecyiphosphite; Tris(nonylphenyl)phosphite; Distearyl pentaerythritol diphosphite; 2,4,6-tri-tert- 5 butylphenyl-2-butyl-2-ethyl-1,3-propanediol phosphite; Bis(2,4-di-tert-butylphenyl)-pentaerythritol diphosphite; 2,2',2"-nitrilo triethyl-tris[3 ,3 ',5,5 '-tetra-tert-butyl-1,1'- biphenyl-2,2'-diyl]phosphite; Bis[2,4-di-tert-butyl-6-methyl-phenyl]ethyl phosphite; 2,2'- Ethylidene-bis-(4,6-di-tert-butylphenyl)fluorophosphite; Tris(2,4-di-tert-butylphenyl)phosphite; the 4,6-di-tert-butyl-m-cresol condensation products with the Friedel-Crafts-reaction products of biphenyl and phosphorus trichloride; Tetrakis [2,4-di-tert-butylphenyl]-4,4'-biphenylenediphosphonite; the condensation products of 2,4-di-tertbutylphenol with the Friedel-Crafts-reaction product of biphenyl and PCl_3 .

6. (currently amended) A method for enhancing the processing stability of polyethylene-based thermoplastic polymers comprising incorporating therein before or during processing a stabilizing quantity of the stabilizer composition comprisingaccording to claim 1

- a) at least one sterically hindered phenol,
- b) at least one phosphorus-containing secondary antioxidant, and
- c) at least one tocopherol compound

wherein the weight ratio of component (a) to component (b) is from 2:1 to 1:4 and the weight ratio of component (a) to component (c) is from 2:1 to 10:1.

7. (previously presented) A method according to claim 6 wherein the stabilizer composition is added in an amount of from 0.001 to 5% by weight, based on the thermoplastic polymer.

8. (canceled)

9. (currently amended) A masterbatch composition for a polyethylene-based thermoplastic polymer comprising

- a) at least one sterically hindered phenol,
- b) at least one phosphorus-containing secondary antioxidant, and
- c) at least one tocopherol compound

wherein the weight ratio of component (a) to component (b) is from 2:1 to 1:4 and
the weight ratio of component (a) to component (c) is from 2:1 to 10:1 a stabilizer composition
according to claim 1

and a thermoplastic material which is identical or compatible with the polyethylene-based thermoplastic polymer to be stabilized.

10. (previously presented) A masterbatch composition according to claim 9 comprising 10 to 80% by weight of the stabilizer composition and 90 to 20% by weight of the thermoplastic material.

11. (canceled)

12. (previously presented) A method according to claim 6 wherein the stabilizer composition is added in an amount of from 0.01 to 1% by weight, based on the thermoplastic polymer.

13. (previously presented) A method according to claim 6 wherein the stabilizer composition is added in an amount of from 0.1 to 0.5% by weight, based on the thermoplastic polymer.

14. (previously presented) A masterbatch composition according to claim 9 comprising 5 to 25% by weight of the stabilizer composition and 95 to 75% by weight of the thermoplastic material.

15. (new) A polymer article according to claim 1 stabilized by the incorporation of a stabilizing quantity of a stabilizer composition comprising

- a) tetrakis[methylene-3-(3',5')-di-tert-butyl-4'-hydroxyphenyl)propionate]methane,
- b) a mixture of tetrakis(2,4-di-tert-butylphenyl)-biphenylene-diphosphonite, bis(2,4-di-tert-butylphenyl)biphenylene-monophosphonite and tris-(2,4-di-tert-butylphenyl)phosphite and
- c) α -tocopherol.

16. (new) A polymer article according to claim 15 where the weight ratio of component (a) to component (b) is from 2:1 to 1:1 and the weight ratio of component (a) to component (c) is from 5:1 to 10:1.

17. (new) A polymer article according to claim 15 comprising

- a) tetrakis[methylene-3-(3',5')-di-tert-butyl-4'-hydroxyphenyl)propanoate]methane,
- b) a mixture of tetrakis(2,4-di-tert-butylphenyl)-biphenylene-diphosphonite, bis(2,4-di-tert-butylphenyl)biphenylene-monophosphonite and tris-(2,4-di-tert-butylphenyl)phosphate and
- c) α -tocopherol

where the weight ratio of component (a) to component (b) is 1:1 and the weight ratio of component (a) to component (c) is 10:1.